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DB=USPT; PLUR=YES; OP=ADJ

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<a href="#">L3</a>	((101/453  101/454  101/455  101/456  101/457  101/458  101/459  101/460  101/461  101/462  101/463.1  101/464  101/465  101/466  101/467 )!.CCLS. )	2135	<a href="#">L3</a>
<a href="#">L2</a>	L1 and (hydrox\$ or ion)	1	<a href="#">L2</a>
<a href="#">L1</a>	6315916.pn.	1	<a href="#">L1</a>

END OF SEARCH HISTORY

**WEST**

Your wildcard search against 2000 terms has yielded the results below

Search for additional matches among the next 2000 terms

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Print

Search Results - Record(s) 1 through 2 of 2 returned.

☐ 1. Document ID: US 6344306 B1

L32: Entry 1 of 2

File: USPT

Feb 5, 2002

DOCUMENT-IDENTIFIER: US 6344306 B1

TITLE: Directly imageable waterless planographic printing plate precursor, and directly imageable waterless planographic printing plate

Brief Summary Paragraph Right (29):

The generated decomposition product is considered to consist of CO, CO.sub.2, H.sub.2 O, remaining solvent, etc. judging from the results of TG-GC/MS measurement. Furthermore, when a thermally decomposable compound is contained in the ink acceptable layer, its decomposition product is generated. If a metal-containing organic compound is used as the thermally decomposable compound, its ligand is generated. If a nitro compound is used, NO<sub>x</sub> is generated. If a peroxide is used, O.sub.2, methanol, etc. are generated. If an azo compound or diazo compound is used, N.sub.2, etc. are generated. Particular examples include polar solvents, polar substances, etc. such as acetylacetone and butanol, though not limited to them.

Brief Summary Paragraph Right (40):

The dyes which can be used here include all the dyes with the maximum absorption wavelength in a range of 400 nm to 1200 nm. Preferable dyes include acid dyes, basic dyes and oil soluble dyes for electronics and recording, based on cyanine, phthalocyanine, phthalocyanine metal complex, naphthalocyanine, naphthalocyanine metal complex, dithiol metal complex, naphthoquinone, anthraquinone, indophenol, indoaniline, pyrylium, thiopyrylium, squarylium, croconium, diphenylmethane, triphenylmethane, triphenylmethane phthalide, triallylmethane, phenothiazine, phenoxazine, fluoran, thiofluoran, xanthene, indolylphthalide, spiropyran, azaphthalide, chromenopyrazole, leucoauramine, Rhodamine lactam, quinosoline, diazaxanthene, bislactone, fluorenone, monoazo, ketone imine, disazo, polymethine, oxazine, Nigrosine, bisazo, bisazostilbene, bisazooxadiazole, bisazaflorenone, bisazohydroxyperinone, azo chrome complex salt, triazotriphenylamine, thioindigo, perylene, nitroso, 1:2 metal complex salt, intermolecular CT(charge transfer) dyes, quinoline, quinophthalone and fulgide, triphenylmethane leuco-pigments, cationic dyes, azo disperse dyes, benzothiopyran, spiropyran, 3,9-dibromoanthoanthorone, indanthrone, phenolphthalein, sulfophthalein, ethyl violet, methyl orange, fluorescein, methylviologen, Methylene Blue, dimroth betaine etc.

Brief Summary Paragraph Right (50):

It is preferable that the ink acceptable layer of the directly imageable printing plate precursor of this invention contains a thermally decomposable compound. The compounds preferably used as the thermally decomposable compound include metal-containing organic compounds, ammonium nitrate, potassium nitrate, sodium nitrate, carbonate compounds, nitro compounds such as nitrocellulose, organic peroxides, inorganic peroxides, polyvinylpyrrolidone, azo compounds, diazo compounds, tetrazole compounds and hydrazine derivatives.

Brief Summary Paragraph Right (51):

Especially preferably used are metal-containing organic compounds, organic peroxides,

azo compounds and diazo compounds.

Brief Summary Paragraph Right (118):

The compounds which can be used as the curing catalyst include acids such as organic carboxylic acids including acetic acid, propionic acid and maleic acid, toluenesulfonic acid and boric acid, alkalis such as potassium hydroxide, sodium hydroxide and lithium hydroxide, amines, metal alkoxides such as titanium tetrapropoxide and titanium tetrabutoxide, metal diketenates such as iron acetylacetonate and titanium acetylacetonate dipropoxide, organic acid salts of metals, etc.

Brief Summary Paragraph Right (138):

The developer composition can also contain a surfactant freely. Furthermore, an alkaline material such as sodium carbonate, monoethanolamine, diethanolamine, diglycolamine, monoglycolamine, triethanolamine, sodium silicate, potassium silicate, potassium hydroxide or sodium borate, etc. can also be added.

Brief Summary Paragraph Right (139):

Among them, water, or water containing a surfactant, or furthermore water containing an alkali can be preferably used.

Brief Summary Paragraph Right (140):

Moreover, the developer can also contain a basic dye, acid dye or oil soluble dye such as Crystal Violet, Victoria Pure Blue or Anthrazone Red, to dye the ink acceptable layer at the image area simultaneously with development.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

KWIC

☐ 2. Document ID: US 5750314 A

L32: Entry 2 of 2

File: USPT

May 12, 1998

DOCUMENT-IDENTIFIER: US 5750314 A

TITLE: Method for selectively imaging a lithographic printing plate

Brief Summary Paragraph Right (2):

To make a typical lithographic printing plate, a substrate is provided with a hydrophilic surface which is imaged with an oleophilic material corresponding to the pattern to be printed. The oleophilic material is typically a photosensitive photopolymer or diazo resin which is exposed to light by masking with a film negative. The exposed portions are rendered insoluble in a developer and the unexposed portions remain soluble. Insolubility is typically caused by cross-linking of the photopolymer, the rate of cross-linking enhanced by coating the photopolymer with an oxygen inhibition layer. After exposure the oxygen inhibition layer and the unexposed photopolymer are removed. Other negative working materials useful in this invention include diazo resins mixed with non-photosensitive polymers and resins.

Brief Summary Paragraph Right (4):

Many variations in plate manufacturing processes using photopolymers, diazo resins, mixtures and various combinations are known. The plates generally have images that are planographic, i.e. substantially flat, but they may have raised images for relief printing or intaglio images for gravure printing. Lithographic printing processes may use water as described above or they may discriminate on waterless bases. If waterless, discrimination is achieved by having a finite difference in surface energies between image and non-image areas. Special inks are necessary for this process.

Brief Summary Paragraph Right (10):

U.S. Pat. No. 5,312,654 discloses a method for making a printing plate wherein an ink absorbing layer is selectively imaged with a photopolymerizable composition using an ink jet printer. The ink absorbing layer prevents the ink from spreading and is removed after the ink is cured by exposure to actinic light, thereby exposing a hydrophilic surface where photopolymer has not been deposited. This process is impractical because

the water soluble or alkali soluble coatings used as the ink absorbing layer have serious disadvantages since the ink jet imaged photopolymer sits on top of this layer. On a typical offset press, the use of an aqueous fountain solution would be disastrous for this plate. Additionally, the ink absorbing properties of this film limits control of dot or image formation and the resolution of fine details would still be problematic.

Brief Summary Paragraph Right (16):

If additive diazo resins are used, the coat weight can be much less--5-15 mg/ft.sup.2.

CLAIMS:

18. Method as in claim 16 wherein said negative working photosensitive material is a diazo resin.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

KWIC

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Terms	Documents
131 and (diazo or alkali\$ or basic)	2

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## Search Results - Record(s) 1 through 2 of 2 returned.

☐ 1. Document ID: US 5501150 A

L4: Entry 1 of 2

File: USPT

Mar 26, 1996

DOCUMENT-IDENTIFIER: US 5501150 A

TITLE: Process for the production of a printing plate by inkjet

Brief Summary Paragraph Right (77):

As stated already above the reduction of silver compounds deposited by ink jet is speeded up in alkaline medium. For that purpose the ink image receiving material may contain an alkaline substance or substances by means of which in situ, e.g with one or more substances contained in the ink, hydroxyl ions (HO.sup.-) can be formed. Suitable "in situ" alkali-generating compounds are described in U.S. Pat. No. 3,260,598, in published EP-A 0210659, and U.S. Pat. No. 5,200,295. For example, zinc hydroxide is contained in the recording material and ethylenedinitrilo tetraacetate (EDTA) or a picolinate is contained in the ink.

Current US Original Classification (1):

101/466

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw	Desc	Image							

KWIC

☐ 2. Document ID: US 3720164 A

L4: Entry 2 of 2

File: USPT

Mar 13, 1973

DOCUMENT-IDENTIFIER: US 3720164 A

TITLE: METHOD OF MAKING CORROSION RESISTANT METALLIC PLATES PARTICULARLY USEFUL AS LITHOGRAPHIC PLATES AND THE LIKE

Brief Summary Paragraph Right (11):

According to the present invention, the formation of "black spots" is completely eliminated by the use of purified water in each of the diversified steps of lithographic plate manufacture. The purified water is basically a de-contaminated, de-ionized, de-gasified and de-chlorinated water. Tap water is purified by filtering through an activated carbon filter which removes from the water trapped gasses, such as free chlorine and oxygen, and any solid particles. The water then enters a secondary filter filtration system in which the use of iron, copper or other objectionable metal, is carefully avoided in vessels or piping. The preferred system carries the filtered water in polyethylene, polyvinyl chloride, glass, or stainless steel piping and utilizes vessels made of the same materials. The water leaving the carbon filtration system enters a strong cationic resin bed, which removes the positive ions, such as copper, iron, and magnesium, and replaces them with a hydrogen ion (H+). The water leaving the cationic resin bed is slightly acidic and is passed through a second bed containing a strong anionic resin, which replaces the nitrate, phosphate, and sulphate, which are in the form of an acid, with a hydroxyl ion (OH-). Such cationic and anionic resin beds are available from several manufacturers. The resultant water leaving the second resin

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Search Results - Record(s) 1 through 1 of 1 returned.

☐ 1. Document ID: US 6182571 B1

L11: Entry 1 of 1

File: USPT

Feb 6, 2001

DOCUMENT-IDENTIFIER: US 6182571 B1

TITLE: Planographic printing

Brief Summary Paragraph Right (24):

Preferred colloidal suspensions include insoluble oxides and/or hydroxides, preferably of Group III or IV elements, with silica and aluminum hydroxide being especially preferred.

Brief Summary Paragraph Right (32):

Preferred modifying means are believed to form a deposit or precipitate over said hydrophilic layer which may act as a barrier to the passage of alkaline material from the hydrophilic layer to the image layer. Such a precipitate is preferably essentially insoluble in water. In some cases, the modifying means applied may be capable of chemically reacting with said hydrophilic layer to produce an insoluble precipitate. For example, when aluminum sulphate is used as said restriction means, insoluble aluminum hydroxide may be formed. In other cases, however, the modifying means may act by washing off material from the hydrophilic layer.

Current US Original Classification (1):

101/465

Current US Cross Reference Classification (1):

101/455

Current US Cross Reference Classification (2):

101/456

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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Terms	Documents
L10 and hydrox\$ near5 (insolub\$ or solub\$)	1

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Search Results - Record(s) 1 through 3 of 3 returned.

☐ 1. Document ID: US 6182571 B1

L13: Entry 1 of 3

File: USPT

Feb 6, 2001

DOCUMENT-IDENTIFIER: US 6182571 B1  
TITLE: Planographic printing

Brief Summary Paragraph Right (24):

Preferred colloidal suspensions include insoluble oxides and/or hydroxides, preferably of Group III or IV elements, with silica and aluminum hydroxide being especially preferred.

Brief Summary Paragraph Right (32):

Preferred modifying means are believed to form a deposit or precipitate over said hydrophilic layer which may act as a barrier to the passage of alkaline material from the hydrophilic layer to the image layer. Such a precipitate is preferably essentially insoluble in water. In some cases, the modifying means applied may be capable of chemically reacting with said hydrophilic layer to produce an insoluble precipitate. For example, when aluminum sulphate is used as said restriction means, insoluble aluminum hydroxide may be formed. In other cases, however, the modifying means may act by washing off material from the hydrophilic layer.

Current US Original Classification (1):

101/465

Current US Cross Reference Classification (1):

101/455

Current US Cross Reference Classification (2):

101/456

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

KWC

☐ 2. Document ID: US 6025022 A

L13: Entry 2 of 3

File: USPT

Feb 15, 2000

DOCUMENT-IDENTIFIER: US 6025022 A  
TITLE: Two-component ink jet ink method for the production of lithographic plates

Brief Summary Paragraph Right (37):



For applications where solubility or dispersibility of the polymer in water is desired, the pH of the polymer-containing solution can be adjusted to be either neutral or alkali. Examples of a pH adjuster include an organic amine, such as diethanolamine or triethanolamine; an inorganic alkali, such as sodium hydroxide, lithium hydroxide, or potassium hydroxide; an organic acid; and a mineral acid. The amount of pH adjuster used may be preferably within a range of from about 5 to 100% based on the weight of the polymer. A pH buffer, such a lithium acetate, or 2-(N-morpholino) ethanesulfonic acid, also may be added.

Current US Cross Reference Classification (1) :  
101/463.1

Current US Cross Reference Classification (2) :  
101/465

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC
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### ☐ 3. Document ID: US 5967048 A

L13: Entry 3 of 3

File: USPT

Oct 19, 1999

DOCUMENT-IDENTIFIER: US 5967048 A

TITLE: Method and apparatus for the multiple imaging of a continuous web

#### Brief Summary Paragraph Right (5) :

Lithographic printing plates are also available which are imageable by the use of infrared lasers. For example, U.S. Pat. No. 4,731,317 to Fromson et al., discloses a printing plate based on a substrate which is brush grained in a slurry comprising alumina followed by successive treatments in dilute sodium hydroxide and nitric acid, and subsequent anodizing to achieve an oxide coating weight of 1.5 milligrams per square inch. The substrate may also be silicated after anodizing to improve hydrophilicity. The anodized plate is coated with a diazo resin which is transparent to the radiation of a YAG infrared laser (1064 nanometers), but is sensitive to the longer wavelengths generated within the areas of the anodic oxide exposed to the laser. In this case, the plate is negative working since the diazo is rendered insoluble where the plate is exposed to the laser. Following laser exposure, the unexposed diazo is removed with a solvent to reveal the hydrophilic oxide.

Current US Original Classification (1) :  
101/463.1

Current US Cross Reference Classification (1) :  
101/467

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC
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Terms	Documents
L10 and hydrox\$ same (insolub\$ or solub\$)	3

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starting with: CUR\$(CURED.SUP).P29-P91,P93-P96,P24-P28,P21-P23,P1-P19.

**Search Results -**

Terms	Documents
hydrox\$ same (cur\$ or harden\$ or crosslink\$ or insolub\$) same diazo	50

**Database:**

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**Search:**

L22

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<i>DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ</i>			
<u>L22</u>	hydrox\$ same (cur\$ or harden\$ or crosslink\$ or insolub\$) same diazo	50	<u>L22</u>
<u>L21</u>	hydrox\$ near10 (cur\$ or harden\$ or crosslink\$ or insolub\$) same diazo	0	<u>L21</u>
<u>L20</u>	hydrox\$ near5 (cur\$ or harden\$ or crosslink\$ or insolub\$) same diazo	0	<u>L20</u>
<u>L19</u>	hydrox\$ same diazo and ink near1 jet\$	68	<u>L19</u>
<u>L18</u>	ink near1 jet same diazo and (lithograph\$ or planograph\$)	10	<u>L18</u>
<u>L17</u>	ink near1 jet near7 diazo	39	<u>L17</u>
<u>L16</u>	l15 and (diazo or hydrox\$)	4	<u>L16</u>
<u>L15</u>	('5098474' '4950577' '5756257' 'WO 9813205A')[ABPN1,NRPN,PN,WKU]	9	<u>L15</u>
<u>L14</u>	diazo near5 hydrox\$	76	<u>L14</u>
<u>L13</u>	(lithograph\$ or planograph\$) and (catalyst near5 hydrox\$) and diazo	34	<u>L13</u>
<u>L12</u>	(lithograph\$ or planograph\$) and (catalyst near5 hydrox\$) same diazo	0	<u>L12</u>
<i>DB=USPT; PLUR=YES; OP=ADJ</i>			
<u>L11</u>	L3 and (catalyst) near7 (hydrox\$)	11	<u>L11</u>
<u>L10</u>	L3 and (react\$) same (hydrox\$) same diazo	5	<u>L10</u>
<u>L9</u>	L3 and (react\$) near10 (hydrox\$) same diazo	1	<u>L9</u>
<u>L8</u>	L3 and (react\$) near10 (hydrox\$)	51	<u>L8</u>
<u>L7</u>	L6 and hydrox\$	27	<u>L7</u>
<u>L6</u>	L3 and (hard\$ or cur\$ or crosslink\$ or insolub\$) near5 (ion)	39	<u>L6</u>
<u>L5</u>	L3 and (hard\$ or cur\$ or crosslink\$ or insolub\$) near10 (hydrox\$)	10	<u>L5</u>
<u>L4</u>	L3 and (hard\$ or cur\$ or crosslink\$ or insolub\$) near5 (hydrox\$)	4	<u>L4</u>
<u>L3</u>	L2 or l1	3122	<u>L3</u>
<u>L2</u>	((430/302 )!.CCLS. )	1495	<u>L2</u>
<u>L1</u>	((101/453  101/454  101/455  101/456  101/457  101/458  101/459  101/460  101/461  101/462  101/463.1  101/464  101/465  101/466  101/467 )!.CCLS. )	2135	<u>L1</u>

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Your wildcard search against 2000 terms has yielded the results below

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Search Results - Record(s) 1 through 1 of 1 returned.

☐ 1. Document ID: US 5149614 A

L9: Entry 1 of 1

File: USPT

Sep 22, 1992

DOCUMENT-IDENTIFIER: US 5149614 A

TITLE: Developer compositions for PS plates and method for developing the same wherein the developer composition contains a surfactant having an aryl group, an oxyalkylene group and a sulfate ester or sulfonic acid group

Detailed Description Paragraph Right (34):

Examples of light-sensitive diazo resins contained in the light-sensitive layer of the negative-working PS plate to which the developer composition of this invention is applied are those disclosed in U.S. Pat. Nos. 2,679,498; 3,050,502; 3,163,633 and 3,406,159; and J.P. KOKOKU Nos. Sho 49-48001 (B.P. 1,312,925) and Sho 49-45322 (U.S. Pat. No. 3,679,419) which are made substantially water-insoluble and organic solvent-soluble according to a method as disclosed in J.P. KOKOKU No. Sho 47-1167; U.S. Pat. No. 3,300,309; J.P. KOKAI Nos. Sho 54-98613, Sho 56-121031, Sho 59-78340, Sho 59-22834 and Sho 63-262643. In other words, the light-sensitive diazo resins are first prepared as inorganic salts such as a zinc chloride complex salt and then subjected to counterions exchange reaction to convert these salts to salts with organic compounds having either or both of phenolic hydroxide groups and sulfonic acid groups or hexafluoro-phosphates, tetrafluoroborates or complex salts thereof to thus obtain water-insoluble diazo resins.

Current US Original Classification (1):

430/302

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

KWIC

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Print

Terms	Documents
L3 and (react\$) near10 (hydrox\$) same diazo	1

Display Format:

KWIC

Change Format

DOCUMENT-IDENTIFIER: US 4696891 A

TITLE: Process for the production of negative relief copies using photosensitive composition having 1,2-quinone diazide and quaternary ammonium compound

Brief Summary Paragraph Right (20):

The photosensitive material of the present invention contains, in addition to a 1,2-quinone diazide, a quaternary ammonium compound. The quaternary ammonium compound, which acts as a crosslinking catalyst, advantageously comprises a hydroxide or a salt of a tetraalkyl ammonium or trialkylaryl ammonium compound or a N-alkylpyridinium derivative. Examples of such compounds include the halides, p-toluene sulfonates, tetrabutyl ammonium hydroxide, trimethylphenyl ammonium hydroxide, benzyltrimethyl ammonium hydroxide and coconut oil alkyl dimethylbenzyl ammonium hydroxide (in which the coconut oil alkyl radical is a mixture of alkyl radicals having from 10 to 18 carbon atoms, the majority being radicals having 12 carbon atoms).

Current US Cross Reference Classification (2):

430/302

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

KWC

☐ 7. Document ID: US 4254209 A

L11: Entry 7 of 11

File: USPT

Mar 3, 1981

DOCUMENT-IDENTIFIER: US 4254209 A

TITLE: Dry planographic plate with light sensitive silicone composition

Detailed Description Paragraph Right (2):

In a 500 ml four-necked flask equipped with a stirrer, a reflux condenser, a dropping funnel and a thermometer, 100 g of isopropyl alcohol as a reaction solvent was placed and the air in the flask was replaced by nitrogen. The solvent was heated to 80.degree. C. From the dropping funnel, a mixture of 30 g of acrylonitrile, 30 g of butyl acrylate, 30 g of acrylic acid, 10 g of styrene and 3 g of N,N'-azobisisobutyronitrile as a polymerization catalyst was added to the solvent dropwise for 2.5 hours, then the mixture was heated at 80.degree. C. for 5.5 hours to complete the polymerization and yielded a base polymer. The mixture was cooled to 60.degree. C. and 96 g of isopropyl alcohol, 0.3 g of hydroquinone as a polymerization inhibitor, and 3.75 g of a 40% methanol solution of trimethylbenzyl ammonium hydroxide as a reaction catalyst were added to the mixture. Then the contents were raised to 80.degree. C. and 30 g of glycidyl methacrylate containing 0.3 g of hydroquinone was added dropwise for 1 hour. The reaction was continued for additional 4 hours. After cooling to room temperature, there was obtained light yellow viscous polymer solution. Addition reaction rate of glycidyl methacrylate to the polymer obtained in terms of the carboxyl groups was 68%. Then 250 g of the thus obtained polymer solution (I) was diluted with a mixture of 1300 ml of n-butyl alcohol, 200 ml of benzene and 200 ml of ethyl acetate, and 25 g of pentaerythritol tetramethacrylate as a crosslinking agent, 0.9 g of 2-ethylanthraquinone and 0.1 g of benzoin methyl ether as photopolymerization initiators were added to the mixture with sufficient stirring to give a photopolymerizable composition solution.

Current US Cross Reference Classification (1):

101/456

Current US Cross Reference Classification (2):

101/462

Current US Cross Reference Classification (3):

**WEST**

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File: JPAB

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TITLE: MANUFACTURE OF LITHOGRAPHIC PRINTING PLATE AND PRINTING METHOD

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## INVENTOR-INFORMATION:

NAME

COUNTRY

SASA, NOBUMASA

## ASSIGNEE-INFORMATION:

NAME

COUNTRY

KONICA CORP

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## ABSTRACT:

PROBLEM TO BE SOLVED: To provide a method for manufacturing a novel lithographic printing plate with outstanding sensitivity, plate wear and print scumming performance and a printing method by which an image can be developed on a printing press using this lithographic printing plate.

SOLUTION: This printing plate is manufactured by supplying a reducing agent (or a coupling agent) to the image recording layer of a lithographic printing plate material having the image recording layer containing a diazo compound (or a diazosulfonate compound) on a support. Light or heat is applied, in an image pattern, to the lithographic printing plate material and the reducing agent (or the coupling agent) of the diazo compound is supplied to the surface of the image recording layer and further, the lithographic printing plate material is mounted on the printing cylinder of a printing press. In addition, dampening solution and/or ink are supplied and the ink is transferred to a receiving element from the image recording layer. Besides, the reducing agent of the diazo compound is supplied, in an imaginal shape, to the surface of the image recording layer containing the diazo compound using an ink jet process, and the light or the heat is applied to the image recording layer and further, the printing plate is mounted on the printing cylinder of the printing press. In addition, the dampening water and/or the ink are supplied to transfer the ink to the receiving element.

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